REMARKS

Applicants respectfully request reexamination of the above-identified patent application. Claims 1-56 are pending in the present application. In the July 27, 2007, Office Action (herein "Office Action"), Claims 1, 2, 4-22, 24-39, and 41-56 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,023,469, to Olson et al. (hereinafter "Olson"). Further, the Office Action rejected Claims 3, 23, and 40 under 35 U.S.C. § 103(a) as being obvious over Olson. Applicants respectfully disagree. While applicants disagree with the grounds of rejection cited in the Office Action, in order to advance the prosecution of the present application, Claims 1, 21, and 38 have been amended to clarify the claim language. Accordingly, applicants submit that Claims 1-56 are not anticipated by, or obvious over, Olson because Olson fails to teach or suggest certain elements of both the independent and dependent claims, which are discussed in detail later in this response. Prior to discussing more detailed reasons why applicants believe that all of the claims of the present application are allowable over the cited reference, a brief description of the present invention and the cited reference is presented.

Summary of the Present Invention

A system and method for processing digital images for display on a graphical user interface is provided. A processing server obtains a first frame of image data corresponding to an output from a digital capture device. The processing server displays the first frame of data within a display area on the graphical user interface. In response, the processing server obtains a designation of at least one processing zone from the user interface device. Each processing zone corresponds to a specific geometric shape and includes processing rule data. The processing server then obtains a second frame of image data corresponding to the output from the digital capture device. The processing server determines whether variations or changes occurred between the first and second frames within the processing zone by evaluating differential data

corresponding to an adjustable parameter. If the server determines that significant variations or changes occurred, the image data represented in the processing zone is stored to a mass storage. In this regard, image data that is in the same or different processing zone may be excluded from being stored to the mass storage if significant variations or changes do not occur. As a result, aspects of the present invention facilitate a system in which image data in a stream of video images will only be stored to the mass storage if motion is detected. Moreover, when motion is detected within a stream of video images, only image data within a subdivided area of the image data may be stored to the mass storage.

Olson

Olson is purportedly directed to a system for automatically capturing image data using a camera and an image processing device. The image processing device is configured to save a reference image from the camera and compare subsequent images to the reference image. In this regard, the image processing device detects and tracks "change regions" between the reference image and subsequent images. A "change region" is an area between successive images in which pixel variations exist. For each change region, the image processing section saves the path of movement of the change region and a selected image of the change region. In this regard, processing may be performed to capture images of a detected person so that images capture the detected person facing and close to the video camera.

(I) The Claims Distinguished: 35 U.S.C. § 102(e)

A. Claims 1, 21, and 38

For purposes of this discussion, independent Claims 1, 21, and 38 will be discussed together because the limitations discussed herein are similar for each claim.

As amended, Claim 1 recites the following:

1. A method for processing image data, the method comprising:

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

obtaining at least one processing zone for processing digital data obtained from a digital capture device, wherein the at least one processing zone corresponds to a specific geometry that is a subdivided area represented in each frame of a stream of video frames;

obtaining a first frame of image data corresponding to the digital capture device that includes the at least one processing zone as a subdivided area;

obtaining a second frame of image data corresponding to the digital capture device that includes the same at least one processing zone;

determining whether there is significant change in the image data between the first and second frames within the same at least one processing zone, wherein the determination of significant change in the image data is made by evaluating differential data corresponding to an adjustable parameter in the image data that is represented within a geometry of the same at least one processing zone; and

processing an event only if a significant change in the image data is determined between the first and second frames within the same at least one processing zone, wherein processing the event includes storing the image data in the same at least one processing zone to a mass storage only if significant change in the image data is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change in the image data is determined.

As amended, Claim 21 recites the following:

21. A system for providing security monitoring, the system comprising:

one or more monitoring locations including a monitoring device operable to generate a digital image;

a central processing server operable to obtain the digital image and generate a user interface;

at least one monitoring computing device operable to display the user interface and to obtain one or more processing zones corresponding to the digital image data, wherein the central processing server processes the digital image data to determine whether significant change exists in at least one processing zone between successive frames of the digital image data, and only if a significant change is identified, the central processing

server stores the digital image data in the at least one processing zone to a mass storage and excludes the digital image data in the same or different at least one processing zone from being stored to the mass storage if no significant change is identified.

As amended, Claim 38 recites the following:

38. In a computer system having a graphic user interface including a display and a user interface device, a method for processing image data, the method comprising:

obtaining a first frame of image data corresponding to an output from a digital capture device;

displaying the first frame of data within a display area in the graphical user interface;

obtaining a designation of at least one processing zone from the user interface device, wherein the processing zone corresponds to a specific geometric shape within the display area that represents a subdivided area in a stream of video frames and includes processing rule data;

displaying the processing zone within the display area of the graphical user interface;

obtaining a second frame of image data corresponding to the output from the digital capture device that includes a specific geometric shape within the display area representing a subdivided area in a stream of video frames;

determining whether there is significant change between the first and second frames within the at least one processing zone, wherein the determination of significant change is made by evaluating differential data corresponding to an adjustable parameter; and

processing an event only if a significant change is determined between the first and second frames within the at least one processing zone, wherein processing the event includes storing the image data in the at least one processing zone to a mass storage only if the significant change is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change is determined.

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Each of the independent Claims 1, 21, and 38 recites determining whether a significant change exists in a processing zone or subdivided area that is included in a plurality of frames of video data and processing an event only if a significant change has been identified. In this regard, processing the event includes storing the image data that appears in at least one processing zone to a mass storage only if the significant change has been identified and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change has been determined. Simply stated, Olson does not teach a system for storing image data that appears in a processing zone to a mass storage only if a significant change is determined and excluding image data in the same or different processing zone from being stored to the mass storage if no significant change has been determined.

The Office Action asserts that Olson teaches the aforementioned recitation of Claims 1, 21, and 38 at Col. 6, lines 21-52. The relevant portion of Olson states the following:

> More specifically, the image processing section 27 has already stored on the hard disk drive 34 the reference image of FIG. 5. In the disclosed embodiment, the reference image of FIG. 5 is first sub-sampled, and then the resulting low-resolution version of the image is stored on the hard disk drive 34, in order to reduce the amount of storage space needed for each such reference image. Objects which enter the observed area are of primary interest, rather than the observed area itself, and a low-resolution image of the observed area is thus sufficient for most applications.
>
> For each detected object such as the person 86, the image processing section 27 also determines the Cartesian coordinates within each image of the midpoint of the lower side of the bounding box for that detected object. This information is saved on the hard disk drive. In other words, for each detected object, a Cartesian coordinate pair for that object is saved for each video image in which the object is present. As to a given object, the set of Cartesian coordinate pairs for all of the images in which that object was present can serve as a trace of the movement of the object within the observed area, as will be discussed in more detail later.
>
> The image processing section 27 also saves a selected image of each detected object. In the disclosed embodiment, this selected image is just a

> portion of the overall image from the video camera 23. In particular, it is the portion of the image which is located within the bounding box for the object of interest. Thus, if the selected image for the person 86 was derived from the video image of FIG. 6, it would be the portion of that image within the bounding box 87. This selected image or image portion is stored at full resolution, in order to have a top-quality view of the detected object.

The relevant portions of Olson show that the Olson system not only saves the reference image on the hard drive, but also saves Cartesian coordinates within each image of the midpoint of the lower side of a bonding box for each detected object, and further saves a selected image of each detected object. In other words, the Olson system not only saves multiple instances of the detected object on the hard drive, but also the reference image. In contrast, Claims 1, 21, and 38 generally recite saving the image data on the hard drive, and the image data is only saved if a significant change is determined between two consecutive image frames. The Olson system, at the very least, saves the reference image on the hard drive irrespective of any detected object within the reference image.

In addition to the reasoning stated above, independent Claims 1, 21, and 38 recite determining whether there is a significant change between the successive frames in a video stream within the at least one processing zone that is a subdivided area of the video frames, wherein the determination of significant change is made by evaluating differential data. In other words, aspects of the present invention subdivide areas within a video frame. Then, determinations are separately made regarding whether a significant change (i.e., motion) has been detected in each of the processing zones that are subdivided areas of the video frame. Only if motion has been detected in one of the processing zones, the image data in the processing zone where the motion has been identified is stored to a mass storage. Image data in the same or different processing zones where no motion has been identified is discarded. As a result, aspects of the present invention greatly reduce the amount of image data that is saved to mass storage as

well as saving the image data to the mass storage only when a significant change is identified. In contrast, the Olson system captures a particular object in a "selected" image in which a person is most likely to be identified, as well as saving multiple instances of the particular object and at least one instance of the "selected" image.

As explained above, Olson fails to teach or suggest a system and method for processing image data comprising processing an event only if a significant change in the image data is determined between the first and second frames within the same at least one processing zone, wherein processing the event includes storing the image data in the same at least one processing zone to a mass storage only if significant change in the image data is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change in the image data is determined. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 1, 21, and 38 and the allowance of Claims 1, 21, and 38.

Claims 2, 4-20, 22, 24-37, 39, and 41-56

Claims 2 and 4-20 depend on independent Claim 1, Claims 22 and 24-39 depend on independent Claim 21, and Claims 39 and 41-56 depend on independent Claim 38. As discussed above, Olson fails to teach each and every element of independent Claims 1, 21, and 38. Accordingly, for the above-mentioned reasons, Claims 2, 4-20, 22, 24-37, 39, and 41-56 are also not anticipated by Olson. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 2, 4-20, 22, 24-37, 39, and 41-56, and the allowance of Claims 2, 4-20, 22, 24-37, 39, and 41-56.

(II) The Claims Distinguished: 35 U.S.C. § 103(a)

As noted above, Claims 3, 23, and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson. Applicants respectfully disagree. Claim 3 depends directly or

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

indirectly on independent Claim 1, Claim 23 depends directly or indirectly on independent Claim 21, and Claim 40 depends directly or indirectly on independent Claim 38. As discussed above, since Olson fails to teach or suggest each and every element of independent Claims 1, 21, and 38, Claims 3, 23, and 40 are allowable over Olson. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 3, 23, and 40 and the allowance of Claims 3, 23, and 40.

CONCLUSION

In view of the foregoing amendments and remarks, applicants respectfully submit that the above-identified patent application is in condition for allowance. Reconsideration of the present application, as amended, and allowance of the claims at an early date are solicited. If the Examiner has any questions or comments concerning this matter, the Examiner is invited to contact applicants' undersigned attorney at the number provided below.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}

Clint J. Feekes
Registration No. 51,670
Direct Dial No. 206.695.1633

CJF:jlg

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100